

REMARKS

The following remarks are prepared in response to the Office Action of July 13, 2005.

Claims 1-4, 9, 11, 12, and 14-23 are pending in this application, after entry of this amendment.

Claims 5-8, 10, and 13 have been cancelled. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

The present invention provides an improved broadcasting apparatus, broadcasting method, program recording medium, and a specific program that allows receipt of program data during a reproduction time period. The broadcasting apparatus can receive program data even when the user starts to watch the program from some midpoint of the program. The time lag between the starting time of broadcasting of the specific program and the starting time of reproduction of the program data of the specific program can be reduced by allotting a broadcasting bandwidth for the reproduction period to the specific program and allotting part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program, and the remaining broadcasting bandwidth to another program. This can be accomplished by repeatedly transmitting program data of the other program while transmitting program data of the specific program in the preceding time period, and repeatedly transmitting the program data of the specific program in the reproduction time period.

The present invention further provides an improved broadcasting apparatus, broadcasting method, program recording medium, and a specific program which enables simultaneous reproduction of a data broadcast and a normal broadcast including a video stream and an audio stream. The program data of the specific program, which relates to a commercial program, is inserted in the normal program. The reproduction time period of the specific program is the

same as the broadcast time period of the commercial program. Hence, the waiting time for all interactive operations does not occur even at the starting time of reproduction.

The Office Action rejected claims 1, 9, 12, and 15-23 of this application for double patenting claims 1, 17, 20, 28, 29, 30, 32, 33, 34, 36, 37, and 38 of Application No. 09/901258. Applicant hereby amends the claims to moot this rejection.

The Office Action contended that the *Eldering* (U.S. Patent No. 6,615,039) is capable of anticipating Claims 1, 2, 4, 5, 6, 15, 18 and 21 of the present invention.

Applicant respectfully traverses this contention.

The *Eldering* reference is primarily concerned with transmitting auxiliary data within programming to different subgroups in a telecommunication system, so that the reception apparatus accumulates the auxiliary data. Column 10, Lines 37-41 of *Eldering* teaches that the auxiliary data is inserted between packets of primary programs whenever the distribution channel is idle. Column 10, Lines 8-10 teaches that the auxiliary data is distributed in “non-real time.” This auxiliary data may arguably correspond to the audiovisual data of a specific program in the present invention, which is different from the program data of the present invention. The audiovisual data comprises the program content. See page 25, line 9. Meanwhile, the program data, also referred to in the specification as “contents data,” comprises messages [see page 27, line 17], graphical images which present information relating to the program [see page 31, lines 15-16], and scripts which are executed in accordance with the interactive operation by the user [see page 31, lines 17-18].

Amended Claim 1 includes the following features:

[A] allotment means for allotting a broadcasting bandwidth for the reproduction time period to the specific program and allotting a part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program and the other part of the broadcasting bandwidth to another program; and

[B] transmission means, in accordance with the result of allotment by the allotment means, for (a) repeatedly transmitting program data of the other program while transmitting program data of the specific program in the preceding time period, and (b) repeatedly transmitting the program data of the specific program in the reproduction time period.

[C] wherein the transmission means further transmits a normal program that includes a video stream and an audio stream, the specific program has the program data that relates to a commercial message which is inserted in the normal program, and the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

According to the present invention, the broadcasting bandwidth is allotted to audiovisual data and program data. See FIG. 6. The broadcasting bandwidth for program data is further allotted in [A] to provide a bandwidth for the reproduction time period of a first program, a bandwidth for a preceding time period immediately before the reproduction time period to the first program, and the other part of the broadcasting bandwidth to a second program.

The Office Action contends that the allotment means is disclosed in the *Elderling* reference at Col. 7, lines 29-34. *Elderling* suggests that the auxiliary data “may be received shortly in advance of or well in advance of the insertion time.” Col. 10, lines 2-3 that is relied upon in the Office Action only discloses the constituents of a program. The reference does not disclose or suggest that the program data of a first and a second program are sharing the broadcasting bandwidth. Rather, the reference only suggests that the auxiliary data is transmitted at an earlier time by multiplexing it with primary programs. See Col. 9., lines 63-65.

FIG. 7 of the *Elderling* reference shows that auxiliary data (AD1 and AD2) are transmitted at an earlier time from programming transmission, rather than transmitted simultaneously. FIG. 7 also shows that the auxiliary data is inserted between programming, rather than share the same bandwidth. Consequently, the multiplexing of the *Elderling* reference can only be achieved using time-division multiplexing (TDM), which does not provide the allotment means of the present invention.

According to the present invention, the transmission means in [B] involves transmitting program data to be broadcasted together with audiovisual data of a specific program broadcasted with the reproduction time. The program data is presented at the reception apparatus according to a user's selection instruction. In the preceding time period, the allotting means allots a part of the broadcasting bandwidth to the specific program, and the transmission means transmits program data of the specific program in the allotted broadcasting bandwidth. Consequently, the reception apparatus has already received the program data at the broadcast starting time of the corresponding audiovisual data, and the program data is ready to be presented upon reception of the user's selection instruction without any waiting time. The *Eldering* reference does not disclose this feature nor does it disclose or suggest the "program data" of the present invention.

While the box in the lower right hand corner of FIG. 7 in the *Eldering* reference shows advertising AD1 and AD2 inserted between programming, neither the figure nor the specification disclose or suggest a means for the "repeated" transmission of program data. The Office Action contends that "sending the data whenever there is spare bandwidth is being interpreted as being equivalent to repeatedly sending data." FIG. 7 only shows insertion of a different advertisement between programming, but not reinserting the same advertisement or repeatedly transmitting program data.

Eldering states that the "auxiliary data is distributed in non-real time . . . and is stored locally at the selected receivers for real-time presentation at a later time." Col. 10, lines 7-10. Furthermore, the *Eldering* reference emphasizes that "[b]y doing away with the requirement for real-time or near real-time distribution . . . it becomes easier to efficiently utilize the available channel bandwidth." Col. 10, lines 22-25. Consequently, the *Eldering* reference teaches away from the claimed invention because its object is to "efficiently utilize the available channel

bandwidth" by transmitting the auxiliary data once and storing that data for "real-time presentation at a later time." Col. 10, lines 8-10.

According to the present invention, the transmission means in [C] further transmits a normal program that includes a video stream and an audio stream, the specific program has the program data that relates to a commercial message which is inserted in the normal program, and the reproduction time period of the specific program is the same as a broadcast time period of the commercial message. The *Eldering* reference does not disclose nor suggest this feature in combination with elements [A] and [B] of the present invention.

Finally, the object of the cited reference differs from the present invention. The object of the cited *Eldering* reference is to selectively present a variety of auxiliary data (i.e. commercials) depending on the users. See Col. 2., Lines 11-14. However, the object of the present invention is to present, to users, program data to be presented together with audiovisual data (i.e. commercials) of a specific program without any waiting time. Hence, the present invention is different both in object and structure from the cited *Eldering* reference.

Claims 2-4 depend from Claim 1. Thus, these claims are patentably distinct from the *Eldering* reference for the same reasons advanced above with respect to Claim 1. Moreover, independent Claims 15, 18 and 21 are also patentably distinct from the *Eldering* reference for the same reasons advanced above with respect to Claim 1.

The Office Action further rejected Claims 3, 7-14, 16, 17, 19, 20, 22, and 23 as being obvious over a combination of *Eldering* in view of *Suzuki* (U.S. Patent No. 6,401,243). We have already demonstrated the inadequacies of teaching the present invention in the *Eldering* disclosure and under 35 U.S.C. §103, it would be incumbent upon the teaching in the *Suzuki* reference to provide a teaching reference for supplementing the deficiencies of the *Suzuki* disclosure.

It should be noted that the burden of establishing a *prima facie* case of obviousness lies with the Patent Office. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988) (stating: “The PTO has the burden under section 103 to establish a *prima facie* case of obviousness”). To establish a *prima facie* case of obviousness, (1) there must be some suggestion or motivation (either in the references themselves or in the knowledge generally available to one of ordinary skill in the art) to combine the reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations. See *MPEP* §§ 2142-43.

It is presumed that the *Suzuki* reference actually is cited simply for the teaching of a transmission procedure that “[u]pon receiving the reproduction instruction, the temporary memory device reads the corresponding digital video data of the program, and supplies it to the digital television decoding circuit through the switch circuit.” See Column 23, lines 22-25. Like the *Elderling* reference, the “digital video data” corresponds to the “audiovisual data” of a specific program in the present invention, which is different from the “program data” of the present invention.

The present invention does not purport to be an inventor of a two-way information transmission system. The present invention, however, utilizes such known abilities to provide a broadcasting apparatus and method that reduces the time lag between the starting time of broadcasting of the specific program and the starting time of reproduction of the “program data” of the specific program by allotting a broadcasting bandwidth for the reproduction period to the specific program and allotting part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program, and the remaining broadcasting bandwidth to another program. Adding the teaching of the *Suzuki* reference into the *Elderling* reference does not suggest this combination nor the advantages of the present invention. *Suzuki* does not satisfy the deficiencies of the *Elderling* reference.

Applicant accordingly submits that the present invention is more than adequately distinguished over any combination of the references of record by the presently pending claims, and is worthy of patent protection.

If the Examiner believes a telephone interview will assist in the prosecution of this application, the undersigned attorney can be contacted at the listed phone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to, Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on October 26, 2005

By: Sharon Farnus

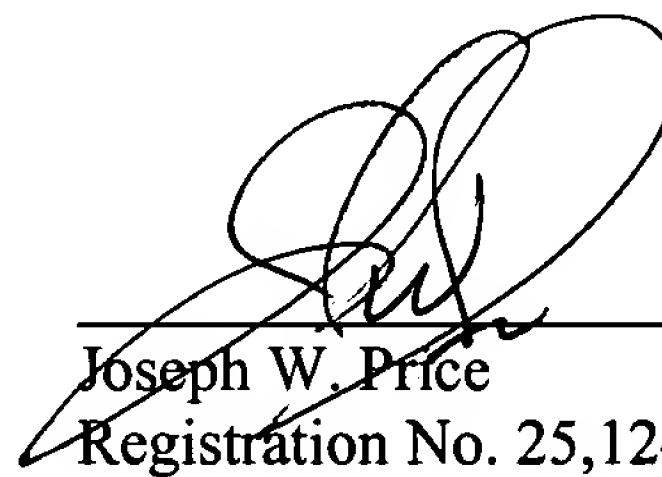


Signature

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Very truly yours,

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